

REMARKS

This Amendment is in response to the Office action (Paper No. 20080415) mailed on 2 May 2008. Re-examination and reconsideration are respectfully requested.

Listing of The Claims

Pursuant to 37 CFR §121(c), the claim listing, including the text of the claims, will serve to replace all prior versions of the claims, in the application.

Status of The Claims

Claims 1-17 are pending.

Amendment of The Claims

Only claims 2-9 are amended for overcome the Examiner's rejection to applicant's Claims 2-9 under 35 U.S.C. §112, therefore, no new issue is raised in this amendment.

Issues Raised by Paper No. 20071010

Claim Rejection under 35 U.S.C. §112

Claims 2-9 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 2-9 are amended in order to overcome the Examiner's rejection under 35 U.S.C. §112.

Claim Rejections - 35 U.S.C. §102

I. Claims 1-9 are rejected under 35 U.S.C. §102(e) as being anticipated by Rakib et al. (US 2004/0172658).

The Examiner in Paper No. 20080415 asserts that Rakib '658 teaches a gateway which contains settop box components and includes a data receiving unit, an extracting unit, transport stream forming unit, a data transforming unit and a processing unit. The applicant respectfully disagrees and traverses the Examiner's assertion by the following reasons.

First, the foregoing assertion about the teachings of Rakib '658 appears nowhere in the specification of Rakib '658. In point of fact, the only place that the content of this assertion appears in the entire prosecution history of the above-captioned application is in Applicant's claim 1. The fact that in the entirety of the U.S. Patent & Trademark Office's collection of worldwide scientific literature, the foregoing description of a novel device appears nowhere, but may be found only in Applicant's claim 1 is significant, and weighs favorably on the question of patentability. The Examiner is expressly requested to acknowledge this fact in future Office correspondence.

Second, the fact that Paper No. 20080415 was unable to find any description of Applicant's claimed invention among the several tens of millions of items in its database of prior art, and was instead required to repeat the language of Applicant's claim 1 in order to characterize the prior art, is irrefutable evidence of the novelty of the device defined by Applicant's claim 1. Moreover, this resort to plagiarization of the text of Applicant's claim is convincing evidence of a hindsight reconstruction of the prior art in the light provided by Applicant alone. Continued maintenance of this rejection is therefore improper.

Third, the applicant provides analysis in the following sections (1) through (4) in order to argue the Examiner's rejection against the applicant's Claim 1.

(1) The Examiner, on page 3 in Paper No. 20080415, states that Rakib '658 defines "a data receiving unit being connected to a digital subscriber line port and an Ethernet port (86 and 128, Fig. 4A or only 128, which is connected to a DSL modem input 182, Fig. 4A, or 378, Fig. 8, and to a Ethernet input 18 and 20 FIGS. 4A and 8; [0087]), said data receiving unit receiving signals from at least one selected from among an asynchronous transfer mode network and an Internet protocol network ([0037]; [0049]-[0053]; [0061]-[0068]; [0087]-[0096]), the signals corresponding to at least one selected from among asynchronous transfer mode digital broadcasting, asynchronous transfer mode video on demand, Internet protocol mode digital broadcasting, and Internet protocol video on demand ([0037]; [0049]-[0053]; [0056]-[0059]; [0080]-[0084]; [0151]-[0153]; [0166]; [0170]-[0174]; [0184]-[0185]), said data receiving unit make an identification of the received signals by determining when the received signals are asynchronous transfer mode data, when the received signals are Internet protocol over asynchronous transfer mode data, and when the received signals are Internet protocol data, said data receiving unit transmitting information corresponding to the received signals in dependence upon the identification (ATM, IP or IP over ATM can be received by the DSL input, therefore, it is inherent that information about the data format needs to be at least in the header of the packets for identification and for letting the system know how to treat the data)".

In view of the divergence from language of Rakib '658 and the language of Paper No. 20080415, the completeness mandated by 37 C.F.R § 1.104 (a) (b) and (c) has not been provided by the Examiner's explanation of Rakib '658. Written clarification in non-final office correspondence

is respectfully requested.

Rakib '658's routing circuit 86 is "a microprocessor programmed doing the conversions from IP to Ethernet and vice versa, routing table construction and packet routing functions along with any other functions necessary for a router including network interfaces and any other functions required of the routing process described in the flowcharts herein". (See paragraph [0087] of Rakib '658) Rakib '658's host microprocessor 128 "tells tuner 100 which channel to tune and determines from the Ethernet packet source address which TV's network adapter requested the data". (See paragraph [0125]) None of these two components (i.e., host microprocessor 128 and routing circuit 86) teaches "a data receiving unit being connected to one of a digital subscriber line port and an Ethernet port, ..., said data receiving unit making an identification of the received signals by determining when the received signals are asynchronous transfer mode data, when the received signals are Internet protocol over asynchronous transfer mode data, and when the received signals are Internet protocol data, said data receiving unit transmitting information corresponding to the received signals in dependence upon the identification." The applicant, however, expressly teaches that, in Claim 1 and FIG.1, VDSL transmitting/ receiving unit 101 and Ethernet transmitting/ receiving unit 102 respectively connect to ATM network and IP network. In other words, the applicant's data transmission system separately receives and identifies data from ATM network and IP network , and no further complicated functionality is required for the receiving units. In the applicant's invention, the step of identifying ATM, IP or IP over ATM protocol is critical for separately processing different protocol in different paths within the claimed settop box. Rakib '658 however nowhere mentions that identification of the input data should be made at the beginning of the data transmission in the data

transmission system and thus nowhere indicating that data with ATM, IP and IP over ATM protocols are processed in different paths. Therefore, the Examiner has mislabeled host microprocessor 128 and routing circuit 86 in an effort to demonstrate anticipation.

The Examiner further states that “ATM, IP or IP over ATM can be received by the DSL input; therefore, it is inherent that information about the data format needs to be at least in the header of the packets for identification and for letting the system know how to treat the data.” The applicant respectfully disagrees with the Examiner’s assertion. Protocol indicator contained in each data signal does not necessarily teach that a receiving unit receiving the data signal MUST have functionality of identifying the protocol of the data signal, and does not necessarily show an intent of implanting functionality of identifying the protocol of the data signal into the receiving unit, because the existence of the header indicating data format is not equivalent to the existence of a stage of identification of data packet at the receiving unit. In other words, the performance of the identification may be executed at any stage other than the stage of reception of data, and may not be executed at any stage when the data format does not anticipate the process of the data transmission. Therefore, even though Rakib ‘658's gateway 14 receives data having different protocol types, it is not proper to conclude that Rakib ‘658 inherently teaches a data receiving unit separately receiving data from a digital subscriber line port and an Ethernet port and identifying protocols of received data.

(2) The Examiner cited Rakib ‘658's IP video circuit 158 to suggest the anticipation of the applicant’s extracting unit. The applicant has Claim 1 in order to explicitly define the extracting unit as defined in claim 1. Rakib ‘658's IP video circuit 158 may “determine which IP destination address

to use in constructing the IP packets via data received from the host microprocessor 128”, and may assemble an address header for each IP packet. In other words, Rakib ‘658's IP video circuit 158 handles only IP packets. The applicant’s extracting unit, on the other hand, is “an extracting unit determining whether the transmitted information received from the digital subscriber line port corresponds to the asynchronous transfer mode or Internet protocol mode, when the transmitted information corresponds to the asynchronous transfer mode and simultaneously corresponds to portion of a Moving Picture Experts Group transport stream, the extracting unit extracting valid cells from asynchronous transfer mode cells”. The applicant’s extracting unit is not only able to handle both ATM and IP protocol data but also extracts valid cells from MPEG stream. Comparing Rakib ‘658's IP video circuit 158 and the applicant’s extracting unit, the applicant concludes that Rakib ‘658's IP video circuit 158 does not teach applicant’s extracting unit and these two electrical components has different functionality. Therefore, Rakib ‘658 does not teach an extracting unit which can handle support either ATM mode signal or IP mode signal.

(3) The Examiner further cited Rakib ‘658's video adapter 30 and asserted that Rakib ‘658's video adapter 30 is identical to the applicant’s transport stream forming unit. Rakib ‘658's video adapter 30 functions to convert the compressed digital data in received Ethernet packets to video signals on line 32 and provides the video signals to television 28 as shown in FIG. 3. Rakib ‘658's video adapter 30 electrically connecting to LAN 20 acts as a settop box. Because LAN 20 “can be Fast Ethernet, Switched Ethernet, FDDI, ATM and Fibre Channel Arbitrated Loop” and only a single LAN line 20 is electrically connected to video adapter 30 (as shown in Rakib ‘658's FIG. 3), and video adapter 30 may support either ATM mode signal or IP mode signal, therefore, Rakib ‘658's video adapter

30 most likely support either ATM mode or IP mode and is merely one of related arts as described in the applicant's paragraph [0029]. Therefore, Rakib '658's video adapter 30 does not solve the problem that "most of the general xDSL settop boxs support only single mode" while the applicant's Claim 1 defines a novel settop box solving this problem. Therefore, Rakib '658 does not possibly suggest or teach the applicant's settop box.

(4) The Examiner asserts that "network adapter, 30, Fig. 4A. Given that the LAN can be ATM or other type of protocol, instead of Ethernet -[0049]- ATM cells would be sent to the network adapter, and where about 4 ATM cells make up one MPEG stream packet", and network adaptor 30 is equivalent to the applicant's transport stream forming unit. The applicant respectfully disagrees this assertion.

Rakib '658's video adapter 30 functions to convert the compressed digital data in received Ethernet packets into video signals on line 32 and provides the video signals to television 28. The applicant's transport stream forming unit is one of components of a settop box and Rakib '658's video adapter 30 as discussed in section (3) may be seen as a settop box. Therefore, Rakib '658's video adapter 30 and the applicant's transport stream forming unit are NOT comparable. Therefore, the Examiner's assertion is lack of reasonable basis.

(5) Comparing Rakib '658 and the applicant's settop box as defined in Claim 1, the applicants' settop box not only has a simpler structure and but also has less components than Rakib '658. Therefore, the applicants' settop box is advantageous compared to Rakib '658's gateway in respect of design and manufacture.

Based on sections (1) through (5), the applicant disagrees with the Examiner's rejection

against the applicant's Claim 1 as anticipated by Rakib '658 as is set forth in Paper No. 20080415 and respectfully asks the Examiner reconsider the applicant's Claim 1.

Additionally, the Applicant notes that the Examiner's cited reference does not define a settop box separately handle ATM mode signal, IP mode signal and IP over ATM mode signal in different paths in the settop box. Consequently, Claims 2-9 are not tendered as being anticipated by Rakib '658.

II. Claims 10-17 are rejected under 35 U.S.C. §102 as being anticipated by Monta et al. (US 7,039,048).

The Examiner, on page 2 of Paper No. 20080415, rejects Claims 10-17 by asserting that the Applicant's arguments with respect to claims 1 through 17 as filed on January 14, 2008 "are moot in view of the new ground(s) of rejection." The Examiner asserts that "Claim 10 calls for 'an apparatus' comprising the elements listed there; however, it does not call for a settop box as argued by the applicant." The applicant Claim 10 in order to explicitly define a settop box which cooperates all the essential limitations described in the specification.

Since the Examiner has withdrawn the rejection against Claim 1 supported by Monta '048 and Claim 10 defines a similar settop box as defined in Claim 1, the applicant respectfully requests that the Examiner reconsider the Claims 10-17.

The issue is not the preamble of claim 10 however, but rather the structure, operation relations defined by the claim between that structure, in conjunction with the results attained, that

is “the subject as a whole” upon which the determination of patentability must be based under 35 U.S.C. §103 (a).

(1) The Examiner asserted that Monta ‘048's **Cherrypicker** is identical and has same functionality as applicant’s apparatus as defined in claim 10. The applicant disagrees with the Examiner’s assertion.

The subject matter of applicant’s claim 10, as defined by the text of claim 10, and Monta ‘048 are totally different and incomparable. Applicant’s claim 10 teaches an improved digital set top box which processes ATM mode data for guaranteeing quality of service in a hardware type, and IP mode data for building a system at a low price in a combination type of hardware and software when a digital broadcasting or video on demand stream is supplied to the digital settop box through a xDSL protocol. The applicant’s settop box is directly electrically connected to a video display. In other words, the downstream data processed by the set top box is displayed on a screen. The applicant’s digital set top box which supports both ATM mode and IP mode MPEG VOD by identifying incoming signals and processing the different incoming signals in different processing paths.

Monta ‘048, however, teaches a Cherrypicker which controls the digital transport stream and that transported stream reaches the customer’s settop box. Monta ‘048's Cherrypicker is intended to receive MPEG transport streams and IP packets streams.

The Cherrypicker and the settop box are two different kinds of communication devices and have different functionality. In fact, the data processed by the Cherrypicker critically needs to be further processed by a set top box.(See lines 52 through 67 in col 16 of Monta ‘048) Therefore,

applicant's settop box advantageous eliminates the requirement of the Examiner's prepared combination for a usage of the Cherrypicker and may directly process the mixed input signals and thus provide the processed input signals to the video display. The applicant's settop box may perform the functionality of both of Monta '048's Cherrypicker and a contemporary settop box. Therefore, the applicant provides a simplified video transmission network compared to Monta '048.

Therefore, applicant's claim 10 defines a different circuit that acts upon the data streams received in a different manner, to produce different output signals than applicant's settop box. Applicant's Claim 10 defines an improved apparatus (i.e. a settop box) "which can process asynchronous transfer mode (ATM) mode data for guaranteeing quality of service in a hardware type, and Internet protocol (IP) mode data for building a system at a low price in a combination type of hardware and software, when a digital broadcasting or VOD stream is supplied to the digital settop box through a digital subscriber line protocol (xDSL)", identifies incoming signals and processing the different incoming signals in different processing paths, and is directly electrically connected a video display and transmits the processed data to the video display. Monta '048, however, defines a packet switched cherrypicker which "receives MPEG transport stream and IP packet streams" and "picking out the desired MPEG packets and IP packets from input streams and putting them together into output streams", and all the streams will be transmitted to and further processed by hosts which are "intended to mean any computer, settop decoder box, digital VCR, videophone...." Monta '048 makes no suggestion of Applicant's apparatus able to process "asynchronous transfer mode (ATM) mode data for guaranteeing quality of service in a hardware type, and Internet Protocol (IP) mode data for building a system at a low price in a combination type

of hardware and software, when a digital broadcasting or VOD stream is supplied to the digital settop box through a digital subscriber line protocol (xDSL)”, and identify incoming signals and processing the different incoming signals in different processing paths, and is directly electrically connected a video display and transmits the processed data to a video display.

Therefore, applicant’s invention teaches a different communication device from that taught by Monta ‘048 and Monta ‘048 could not be possible teach applicant’s invention.

(2) The Examiner further cited Monta ‘048's packet switch 10 as a data receiving unit as defined in applicant’s claim 10. The applicant does not agree with this conclusion.

Monta ‘048 teaches packet switch 10 which receives the packets from IP wrapper 12, web servers, application servers and national backbone. IP wrapper breaks MPEG transport streams into individual MPEG packets and encapsulate these MPEG packets in multicast IP packets. In other words, packet switch 10 and IP wrapper 12 together receives MPEG, IP and ATM packets by encapsulating the MPEG packets. Monta ‘048 also teaches front end processing circuitry of cherrypicker switch which recognize the LAN addresses and TCP/IP addresses. Even though Monta ‘048 provides multiple components which together receive signals as the data receiving unit of an embodiment of applicant’s invention, Monta ‘048 nowhere teaches a data receiving unit “identifying the received signals by determining when the received signals are asynchronous transfer mode data, when the received signals are Internet protocol over asynchronous transfer mode data, and when the received signals are Internet protocol data” as defined in applicant’s claim 10. Therefore, Monta ‘048 teaches packet switch 10 may not be seen identical to the applicant’s data receiving unit.

The Examiner should pause to consider that applicant's claim 10 is not the type of claim found in *KSR Int'l Co. v. Teleflex Inc.*¹ where every element, that is, both the electrical switch and the brake pedal assembly, were standard off-the-shelf items that had been previously used in the same industry, for the same purpose, for many years, to achieve the same result. In *KSR*, neither the claim when read in its entirety, nor the two paragraphs that defined the switch and assembly, did anything more. Consequently, and in conformance with the precedential principles laid down by *Hotchkiss v. Greenwood*,² affirmed its principle of the "functional approach" that "[t]he combination of familiar elements according to known method is likely to be obvious when it does no more than yield predictable results."³

Here, and unlike *KSR*, the Examining staff has failed to show that not even one of the constituent elements of Applicant's claim 10 has ever been known in the art, and has failed to show either the structure (Applicant's data receiving unit, extracting unit, and transport stream forming unit), the operational functions (processing "asynchronous transfer mode (ATM) mode data for guaranteeing quality of service in a hardware type, and Internet Protocol (IP) mode data for building a system at a low price in a combination type of hardware and software, when a digital broadcasting or VOD stream is supplied to the digital settop box through a digital subscriber line protocol (xDSL)", identifying incoming signals and processing the different incoming signals in different processing paths, and is directly electrically connected a video display and transmits the processed

¹ *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1739, 82 USPQ2d @1395 (2008).

² *Hotchkiss v. Greenwood*, 11 Howard 248.

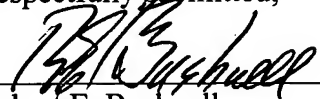
³ *Ex parte Mary Smith*, Appeal No. 2007-1925 (BPAI 2007).

data to a video display, and directly electrically connecting to and directly providing processed signals to a video display), or results attained (Applicant's settop box performing the functionality of both a contemporary settop box and Monta '048's Cherrypicker and thus advantageous eliminating the requirement of the Examiner's proposed Cherrypicker) have ever existed in the art outside of Applicant's specification. Consequently, there is no prima facie showing of obviousness on the administrative record before the Office. Withdrawal of this rejection is therefore respectfully urged.

In view of the foregoing amendments and remarks, all claims are deemed to be allowable and this application is believed to be in condition to be passed to issue. If there are any questions, the examiner is asked to contact the applicant's attorney.

No fee is incurred by this Amendment.

Respectfully submitted,



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